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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,227	06/22/2001	Anant Sahai	60021-0012	7531
7590 11/30/2004				
MacPherson, Kwok, Chen & Heid LLP		EXAMINER		
1762 Technology Drive		AHN, SAM K		
Suite 26				
San Jose, CA 95110		ART UNIT PAPER NUMBER		
		2637		

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/888,227

Applicant(s)

SAHAI ET AL.

Examiner

Sam K. Ahn

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-18 and 59-87 is/are rejected.
- 7) ☒ Claim(s) 1-3 and 19-58 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 013102.22002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Specification***

1. The disclosure is objected to because of the following informalities: on page 21 and 28 of the specification please update the US Patent Application number.

Appropriate correction is required.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, *the method steps as recited in claims 4, 7 and 59* must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. *Please note the 112, 1<sup>st</sup> rejection below.*

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 1-87 are objected to because of the following informalities:

In claim 1, line 12, delete "to calculated" and insert "to the calculated".

In claim 1, line 14, delete "to be selected" and insert "to be the selected".

In claim 2, line 12, delete "pairs" and insert "pair".

In claim 2, line 16, delete "each pair" and insert "each of said pair".

In claim 2, line 35, delete "a selected" and insert "the selected".

In claim 2, line 45, delete "pairs" and insert "pair".

In claim 2, line 46, delete "be selected pairs" and insert "be the selected pair".

In claim 2, lines 48 and 51, respectively, delete "pairs" and insert "pair".

In claim 2, line 49, delete "weighted pairs" and insert "the weighted pair".

In claim 2, line 51, delete "selected block" and insert "selected data block".

In claim 2, line 58, delete "pairs" and insert "pair".

In claim 3, line 1, delete "wherein calculating pairs" and insert "wherein the step of calculating pair".

In claim 3, line 2, delete "the I and Q" and insert "the pair of I and Q".

In claim 4, line 4, delete "set of blocks" and insert "set of data blocks".

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In claim 4, line 5, delete "set of data" and insert "set of first and second set of data".

In claim 4, line 33, delete "selected block" and insert "selected data block".

In claim 5, line 1, delete "wherein calculating pairs" and insert "wherein the step of calculating pair".

In claim 5, line 2, delete "the I and Q" and insert "the pair of I and Q".

In claim 7, line 10, delete "set; and" and insert "set of frequency intervals;".

In claim 7, line 13, delete "the selected" and insert "the corresponding selected".

In claim 7, line 15, delete "selected I and Q correlation integrals" and insert "the selected I and Q correlation integrals;".

In claim 7, line 16, delete "pairs of I and Q correlation values" and insert "I and Q correlation integrals".

In claim 9, line 1, delete "data blocks" and insert "blocks of data".

In claim 19, line 14, delete "be selected" and insert "be the selected".

In claim 27, line 1, delete "calculating pairs" and insert "the calculated pair".

In claim 28, line 2, delete "the receiver" and insert "a receiver".

In claim 33, line 11, delete "with level R" and insert "with the level R".

In claim 33, line 26, delete "selecting pairs" and insert "selecting the pairs".

In claim 33, line 30, delete "each selected" and insert "each of said selected".

In claim 33, line 31, delete "the difference" and insert "a difference".

In claim 33, line 39, delete "selected data" and insert "the selected data".

In claim 33, line 50, delete "with level R" and insert "with the level R".

In claim 59, line 14, delete "be selected" and insert "be the selected".

In claim 59, line 16, delete "the difference" and insert "a difference".

In claim 59, line 18, delete "the position" and insert "a position".

In claim 59, lines 22 and 26, respectively, delete "integrals" and insert "values".

In claim 67, line 1, delete "wherein calculating" and insert "wherein the step of calculating".

In claim 68, line 2, delete "the receiver" and insert "a receiver".

In claim 69, line 2, delete "the receiver" and insert "a receiver".

In claim 76, line 2, delete "integrals" and insert "values".

In claim 76, line 3, delete "the sequence of" and insert "a sequence of the".

In claim 76, line 4, delete "and".

In claim 76, line 6, delete "the transform" and insert "a transform".

In claim 76, line 7, delete "approximations" and insert "approximation".

In claim 76, line 7, delete "integrals" and insert "values".

In claim 78, line 1, delete "the number" and insert "a number".

In claim 78, lines 1-2, delete "the zero-padding".

In claim 84, line 4, delete "integrals" and insert "values".

In claim 86, line 1, delete "maximum magnitude" and insert "highest magnitude calculation".

In claim 86, line 2, delete "the signal" and insert "the received signal".

Claims 8,10-18,20-26,29-32,34-58,60-66,70-75,77,79-83 and 85 directly or indirectly depend on claim 7,19,33 or 59. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 4-18 and 59-87 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 4,7 and 59 appear to recite the methods as illustrated in Figs.2A and 2B.

The claims recite starting from block 202 to block 226. However, the claims do not appear to recite the step by step procedures of Figs.2A and 2B as described in the specification and illustrated in the figures. For example in claim 59, the claim recites the blocks of 202, 204, 206, 220 (calculating I and Q correlation values), then goes back to block 210 (selecting I and Q correlation values) and refers to block 222 (selecting weights...) wherein claims 4 and 7 appear to recite the same steps. The claims do not appear to clearly recite the steps as recited in the specification and the drawings performing the steps from 202-226 without moving back a step and skipping a step, thus do not describe in the specification in such a way as to reasonably convey to one skilled in the art. Please explain

further as to which method step is clearly explained in the specification and the block elements of the figures.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A dependent claim of claim 6 fails to particularly point out and distinctly claim the subject matter by reciting to depend on the claim itself.

### ***Allowable Subject Matter***

6. Claims 1-3 and 19-58 would be allowable if rewritten or amended to overcome the claim objections, set forth in this Office action.
7. The following is a statement of reasons for the indication of allowable subject matter:  
Present application discloses a method steps of correlating a received GPS signal for estimating a carrier frequency wherein a range of candidate frequencies are selected, dividing the received signal into a set of data blocks, and selecting correlation values from a range of candidate frequencies that best matches to a target frequency. Prior arts, Akopian and Tachita, correlation of received GPS signal, however, prior art do not teach the combination of all the method steps recited.



**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tachita teaches a GPS receiver correlating a received signal calculating a phase offset of carrier frequency.

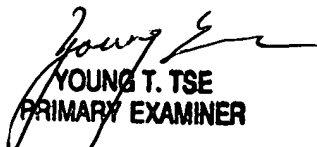
Akopian teaches correlation of spread spectrum signal wherein the received signal is divided into plurality of sections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam K. Ahn  
11/28/04

  
YOUNG T. TSE  
PRIMARY EXAMINER